

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1 - 14. (Canceled)

15. (New) A method for a data transmission in a mobile communication system, wherein data is transmitted in data blocks from a transmitter to a plurality of receivers, said data blocks being identifiable by an identification, wherein the receivers send status indications to the transmitter whether a data block is correctly received, and wherein the transmitter is adapted to perform retransmissions according to the status indications, the method comprising the steps of:

providing the transmitter with a transmission window comprising the transmission status for the data blocks according to their identification;

performing a synchronization to the transmitter for a first receiver of said plurality of receivers by sending a synchronization message between the transmitter and the first receiver, the synchronization message being sent to at least two of said plurality of receivers, wherein a range of identifications of transmitted data blocks is selected in said synchronization;

the first and second receivers stops sending status indications for the data blocks corresponding to the selected range of identifications; and

the at least two of said plurality of receivers sending an acknowledgement for the synchronization message, wherein the transmitter deletes the transmission status indications corresponding to the selected range of identifications from the transmitter window after the acknowledgements are received from a predefined fraction of the plurality of receivers.

16. (New) The method according to claim 15, wherein the synchronization message is sent from the transmitter to all receivers in said plurality.

17. (New) The method according to claim 15, wherein the synchronization message is sent by the first receiver.

18. (New) The method according to any claim 15, wherein synchronization events are defined for the transmitter and the first receiver and the synchronization is performed at the defined synchronization events.

19. (New) The method according to claim 15, wherein the identifications of the data blocks are sequence numbers and the sequence numbers identify the data blocks in a modulo numbering scheme.

20. (New) The method according to claim 15, wherein the receivers have a receiver window comprising identifications of data blocks, which are not correctly received, the receiver window having at least one edge, and wherein the edge of the receiver window is moved in the synchronization.

21. (New) The method according to claim 15, wherein the transmission window comprises a cumulative transmission status for the identifications of the data blocks, wherein the cumulative transmission status is determined from the status indications sent by the receivers in said plurality.

22. (New) The method according to claim 15, wherein the status indications from the receivers cumulatively acknowledge groups of correctly received data blocks.

23. (New) The method according claim 15, wherein the receivers indicate the transmission status in a status message and the transmitter requests the status message with a poll message.

24. (New) The method according to claim 23, wherein the receivers send the status message in reply to the poll message with a random delay.

25. (New) The method according to claim 15, wherein a receiver joins or leaves the data transmission and the transmitter receives a notification of the joining or leaving.

26. (New) The method according to claim 15, wherein the synchronization message identifies a valid selected range of identifications to a receiver joining the data transmission.

27. (New) A transmitter for a mobile communication system, wherein the transmitter is adapted to transmit data blocks to a plurality of receivers, said data blocks being identifiable by an identification, and to receive status indications from the receivers whether a data block is correctly transmitted, and wherein the transmitter is provided with a transmission window comprising the transmission status for the data blocks according to their identification, the transmitter comprising:

means for performing a synchronization to the transmitter for a first receiver of said plurality of receivers by sending a synchronization message between the transmitter and the first receiver, the synchronization message being sent to at least two of said plurality of receivers, wherein a range of identifications of transmitted data blocks is selected in said synchronization;

means for stopping the transmission of status indications for the data blocks corresponding to the selected range of identifications; and

means for receiving an acknowledgement from the at least two of said plurality of receivers for the synchronization message, wherein the transmitter deletes the transmission status indications corresponding to the selected range of identifications from the transmitter window after the acknowledgements are received from a predefined fraction of said plurality of receivers.

28. (New) A computer program product in a computer usable medium of a transmitter for a mobile communication system, wherein the transmitter is adapted to transmit data blocks to a plurality of receivers, said data blocks being identifiable by an identification, and said transmitter adapted to receive status indications from the receivers whether a data block is correctly transmitted, and wherein the transmitter is provided with a transmission window comprising the transmission status for the data blocks according to their identification, the computer program product comprising:

instructions within the computer usable medium for initiating a synchronization with a first receiver of said plurality of receivers by a synchronization message between the transmitter and the first receiver, and to send the synchronization message to at least a second receiver of said plurality of receivers, wherein the first and second receivers send an acknowledgement for the synchronization message;

instructions within the computer usable medium for selecting a range of identifications of transmitted data blocks in said synchronization, and

instructions within the computer usable medium for deleting the transmission status indications for the selected range of identifications from the transmitter window after the acknowledgements are received from a predefined fraction of the receivers, when executed in the processing unit.